

WHAT IS CLAIMED IS:

- 1           1.     An apparatus for providing an electrical and mechanical  
2     connection between an electronic device and a battery terminal  
3     comprising:  
4                 a clip coupled to a battery terminal and at least one  
5     electronic device included in a battery.
- 1           2.     The apparatus of Claim 1, wherein the battery terminal is a  
2     secondary battery terminal.
- 1           3.     The apparatus of Claim 1, further comprising a first housing  
2     element and a second housing element, the second housing element  
3     attached to the electronic device.
- 1           4.     The apparatus of Claim 3, wherein the second housing  
2     element is attached to the first housing element.
- 1           5.     The apparatus of Claim 1, wherein the clip is configured for  
2     maintaining an electrical connection between the battery terminal and the  
3     electronic device.
- 1           6.     The apparatus of Claim 1, wherein the clip comprises at least  
2     one resiliently flexible member.
- 1           7.     The apparatus of Claim 1, wherein at least a portion of the  
2     clip is configured for flexing when the clip is attached to a battery  
3     terminal.
- 1           8.     The apparatus of Claim 1, wherein the clip is a spring clip  
2     formed from metal.

1           9.     The apparatus of Claim 1, wherein at least a portion of the  
2 clip is formed from a conductive material.

1           10.    The apparatus of Claim 1, further comprising a wire coupled  
2 to the clip and the electronic device.

1           11.    The apparatus of Claim 10, wherein the clip is integrally  
2 formed with one of the wire and a housing element.

1           12.    A storage battery module comprising:  
2                a housing element;  
3                a connector attached to the housing element and configured  
4 for electrical attachment to a battery terminal; and  
5                an electronic device attached to the housing element and to  
6 the connector.

1           13.    The storage battery module of Claim 12, wherein the  
2 housing element is configured for coupling to at least one of a battery  
3 container and another housing element.

1           14.    The storage battery module of Claim 12, wherein the  
2 housing element is coupled to at least one of a battery container and  
3 another housing element by at least one of a heat seal, an ultrasonic  
4 weld, and a vibration weld.

1           15.    The storage battery module of Claim 12, wherein the  
2 housing element is made from a polymeric material.

1           16.    The storage battery module of Claim 12, wherein the  
2 connector is configured for maintaining an electrical connection between  
3 the battery terminal and the electronic device.

1           17. The storage battery module of Claim 12, wherein the  
2 connector comprises at least one resiliently flexible member.

1           18. The storage battery module of Claim 12, wherein the  
2 connector is configured for flexing when the connector is attached to the  
3 battery terminal.

1           19. The storage battery module of Claim 12, wherein the  
2 connector is formed from metal.

1           20. The storage battery module of Claim 12, wherein at least a  
2 portion of the connector is formed from a conductive material.

1           21. The storage battery module of Claim 12, further comprising a  
2 wire attached to the electronic device and the connector.

1           22. The storage battery module of Claim 21, wherein the  
2 connector is integrally formed with the wire.

1           23. The storage battery module of Claim 12, wherein the battery  
2 terminal is a secondary battery terminal, the second battery terminal being  
3 connected to a primary battery terminal.

1           24. The storage battery module of Claim 12, wherein the  
2 electronic device comprises at least one of an alarm device, an anti-theft  
3 device, and a state-of-charge detection device.

1           25. The storage battery module of Claim 12, wherein the  
2 electronic device is configured for monitoring a state of a battery.

1           26. The storage battery of Claim 25, wherein the state of a  
2 battery is the amount of stored charge in a battery.

1           27. A housing element for use with a battery comprising:

2 a cover configured for attachment to a battery;  
3 at least one electronic device attached to the cover; and  
4 at least one connector attached to the cover and configured  
5 for coupling the electronic device to a battery terminal.

1 28. The housing element of Claim 27, wherein the cover is  
2 attached to a battery by least one of a heat seal, an ultrasonic weld, and  
3 a vibration weld.

1 29. The housing element of Claim 27, wherein the cover is made  
2 from a polymeric material.

1 30. The housing element of Claim 27, wherein the connector  
2 comprises at least one flexible member.

1 31. The housing element of Claim 27, wherein at least a portion  
2 of the connector is configured for flexing when the connector is attached  
3 to a battery terminal.

1 32. The housing element of Claim 27, wherein at least a portion  
2 of the connector is formed from a conductive material.

1 33. The housing element of Claim 27, further comprising a wire  
2 attached to the electronic device and the connector.

1 34. The housing element of Claim 33, wherein the connector is  
2 integrally formed with the wire.

1 35. The housing element of Claim 27, wherein the electronic  
2 device comprises at least one of a state of health detection device, an  
3 alarm device, an anti-theft device, and a state of charge detection device.

1 36. The housing element of Claim 27, wherein the electronic  
2 device is configured for monitoring a state of a battery.

- 1           37.   A battery comprising:  
2               a first housing element;  
3               a second housing element attached to the first housing  
4 element, the second housing element including at least one electrical  
5 circuit; and  
6               at least one resiliently flexible connector attached to the  
7 second housing element and configured for coupling the circuit to a  
8 battery terminal.
- 1           38.   The battery of Claim 37, wherein the second housing  
2 element is attached to the first housing element by a heat seal.
- 1           39.   The battery of Claim 37, wherein both the first and second  
2 housing elements are made of a polymeric material.
- 1           40.   The battery of Claim 37, wherein the resiliently flexible  
2 connector is configured for maintaining an electrical connection between  
3 the battery terminal and the electrical circuit.
- 1           41.   The battery of Claim 37, wherein the resiliently flexible  
2 connector is configured for maintaining electrical contact during operation  
3 of a battery.
- 1           42.   The battery of Claim 37, wherein the resiliently flexible  
2 connector is configured for flexing when the connector is attached to a  
3 battery terminal.
- 1           43.   The battery of Claim 37, wherein at least a portion of the  
2 resiliently flexible connector is made of a conductive material.
- 1           44.   The battery of Claim 37, further comprising a wire attached  
2 to the electrical circuit and the connector.

1           45.    The battery of Claim 44, wherein the resiliently flexible  
2 connector is integrally formed with the wire.

1           46.    The battery of Claim 37, wherein the electrical circuit is  
2 configured for monitoring a state of a battery.

1           47.    The battery of Claim 37, wherein the electrical circuit forms  
2 a part of at least one of an alarm device, an anti-theft device, a state of  
3 health monitoring device, and a state of charge monitoring device.

1           48.    A storage battery including a system for monitoring a state  
2 of the battery comprising:

3                   a first cover;

4                   a second cover coupled to the first cover and including an  
5 electronic device;

6                   a wire coupled to the electronic device; and

7                   at least one clip coupled to the wire and to a secondary  
8 battery terminal.

1           49.    The storage battery of Claim 48, wherein the second cover is  
2 coupled to the first cover by a heat seal.

1           50.    The storage battery of Claim 48, wherein the electronic  
2 device is configured for monitoring a state of charge of a battery.

1           51.    The storage battery of Claim 48, wherein the electronic  
2 device includes at least one of an alarm device, an anti-theft device, a  
3 state of health monitoring device, and a state of charge monitoring  
4 device.

1           52.    The storage battery of Claim 48, wherein the clip is integrally  
2 formed with the wire.

1           53.    The storage battery of Claim 48, wherein the clip includes at  
2   least one resiliently flexible member.

1           54.    The storage battery of Claim 48, wherein at least a portion  
2   of the clip is formed from a conductive material.

1           55.    The storage battery of Claim 48, wherein the clip is  
2   configured for maintaining electrical contact with the secondary battery  
3   terminal during the operation of a battery.

1           56.    The storage battery of Claim 48, wherein at least a portion  
2   of the clip is configured for flexing when the clip is attached to a battery  
3   terminal.